CLAIMS

What is claimed is:

1. A system for converting a first and a second signal representative of payload and supervisory information, respectively, between an electrical format and a WDM aggregated optical format, the system including:

- at least one first converter for converting said first signal between said electrical format and a first, disaggregated optical format,

- at least one second converter for converting said second signal between said electrical format and a second, disaggregated optical format, and

- at least one optical WDM converter for converting said first and second signals between said first and second disaggregated optical formats and said WDM aggregated optical format,

characterised in that said at least one first converter, said at least one second converter and said at least one optical WDM converter are integrated to a single self-contained module by means of signal propagation paths that are exempt from splices.

2. The system of claim 1, characterised in that said first converter and said second converter have associated signal processing electronics, said signal processing electronics being integrated to said single self-contained module.

3. The system of claim 1, characterised in that said optical WDM converter includes a beam splitter.

4. The system of claim 3, characterised in that said beam splitter has associated an optical connector for conveying said first and said second signals in said WDM aggregated optical format, and in that said beam splitter is arranged to transfer optical radiation between said first converter and said optical connector.

5. The system of claim 3, characterised in that said beam splitter has associated an optical connector for conveying said first and said second signals in said WDM aggregated optical format, and in that said beam splitter is arranged to define an optical signal reflection path between said second converter and said optical connector.

6. The system of claim 3, characterised in that said beam splitter has associated radiation focusing elements interposed between said beam splitter and said first and said second converter.

7. The system of claim 4, characterised in that it includes a further focusing element interposed between said beam splitter and said optical connector for focusing onto said optical connector optical radiation propagating from said beam splitter.

8. The system of claim 7, characterised in that it includes an optical isolator interposed between said beam splitter and said further focusing element.

9. The system of claim 1, characterised in that said first converter and said second converter include laser sources driven with said first and second signals in said electrical format, respectively, and in that said

optical WDM converter includes a WDM combiner to combine said first and said second signals in said first disaggregated optical format and said second disaggregated optical format to produce said WDM aggregated optical format, the system thus comprising a transmitter module.

10. The system of claim 1, characterised in that said optical WDM converter includes a WDM splitter for de-multiplexing said WDM aggregated optical format into said first disaggregated optical format and said second disaggregated optical format, and in that said first converter and said second converter include photoelectric converters for converting said first disaggregated optical format and said second disaggregated optical format into said first and second signals in said electrical format, the system thus comprising a receiver module.

11. The system of claim 1, characterised in that it includes:

- A pair of said first converters, in the form of a first laser source and a first photoelectric converter, respectively;
- a pair of said second converters in the form of a second laser source and a second photoelectric converter, respectively; and
- a pair of said optical WDM converters, in the form of a WDM combiner and a WDM splitter, respectively;

the arrangement being such that said first laser source and said second laser source are arranged for converting a first pair of first and second signals representative of payload and supervisory information, respectively, from said electrical format into a first

pair of first disaggregated optical format and second disaggregated optical format signals and said WDM combiner is adapted to convert said first pair of first and second disaggregated optical format signals into a first WDM aggregated optical format signal, and

- said WDM splitter is adapted to convert a second WDM aggregated optical format signal into a second pair of first and second disaggregated optical format signals, and said first photoelectric converter and said second photoelectric converter are adapted to convert said second pair of first and second disaggregated optical format signals into a second pair of first and second signals representative of payload and supervisory information in said electrical format, the system thus comprising a transceiver module.